

LN91-26014**SPECTRA OF COMET P/HALLEY AT $R = 4 - 8$ AU**

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Spectra of Comet Halley ($\lambda\lambda = 3400\text{-}6500$ Å) were acquired at pre- and post-perihelion distances of 4.8 AU on 1985 Feb 17 (coma $V = 18.9$ mag) and 1987 Feb 01 (coma $V = 15.9$ mag) using the 4.5-m Multiple-Mirror Telescope and the CTIO 4.0-m telescope, respectively. The CN(0,0) violet system band flux at 4.8 AU was ~ 15 times greater at the post-perihelion phase compared to pre-perihelion. Additional post-perihelion spectra, obtained on 1986 Nov 28-30 with the MMT, showed CN(0,0) and very weak C_3 4040 Å emission. The MMT data are one-dimensional spectra (aperture: 5 arc sec diameter) obtained with an intensified Reticon while the CTIO data are two-dimensional spectra (slit length = 280 arc sec) obtained with a 2D-Frutti photon counting system. Extended CN(0,0) emission was detected in the 1987 Feb 1 (at 4.8 AU) spectra to a distance of at least 70 arc sec in the solar and anti-solar directions. Additional CCD spectra obtained with the KPNO 2.2-meter telescope on 1988 Feb. 20 (at 7.9 AU) show scattered solar continuum ~ 32 arc sec diameter. However, no emission features were detected at 7.9 AU.

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